



THE ART OF SUPERGLUE: ACCELERATING DIGITIZATION THROUGH NEXTGEN INTEGRATION

Executive Summary

It's all about integration

There are many different focus areas competing for your attention as you embark on your enterprise digital journey. It's easy to be dazzled by the wide array of options to make the front-end digital experience immersive, memorable and responsive. However, no amount of virtual reality or context-sensitive inputs can

create a truly valuable digital experience to your customers, partners and employees without tight integration with your core data, systems and processes.

Enter the world of APIs, micro-services and other integration tools that form the "digital superglue" of the enterprise.

A recent executive roundtable in New York City brought together dozens of industry experts and enterprise leaders to share practical advice and learnings from those who have accelerated their digital journeys. This paper shares some of the evening's interesting ideas and insights.

Key takeaways include:

■ **Don't over-engineer.** Smart middleware and backend systems are enough to cope with the needs of a growing digital business. They can handle all points of the value chain

■ **Phone-a-friend.** It's vital to work with a partner who can assess the state of an enterprise's digital needs, and use existing architecture more efficiently. Sometimes, a partner even knows your organization better than you do, and can help you tap into work that's already been done internally

■ **Listen in new ways.** Customers are less passive and more digitally savvy than you might think. A successful digital enterprise will tap into its consumer base and use technology to be responsive to their needs



Are you a digital predator or prey?

When it comes to transforming your company into a digital enterprise, it doesn't matter if you have the best of intentions. It doesn't matter if you have a meticulous, step-by-step implementation strategy. It doesn't even matter if you have the funding lined up and the green light from your CEO. If you have accomplished all of this but don't proceed on your digital journey with the right integration strategy, your company is going to pay for your decision-making (or lack of it).

By 2020 - less than four years away - Forrester forecasts that every company will become a digital predator or digital prey.* The right strategy means the difference between winning the digital race, or getting run over by it, either swallowed up by your competitors or stamped out of existence altogether.

At an Infosys Executive Roundtable in February 2016 in New York City, digital experts and executives from the front lines of the digital enterprise, in sectors from banking and luxury retail to manufacturing and life

sciences, gathered to share insights on how to become a predator rather than prey.

The discussion, moderated by our guest, Forrester analyst Nigel Fenwick, helped dispel the notion that in a "digital journey" there is a beginning and an end. Even for companies that are new and therefore born digital, the journey is continuous.

According to Forrester's presentation at the event, it's always changing because to become a digital predator, a company has to act quickly to defend against other predators and change their structures to accommodate the digital paradigm. That means bolstering strategies to accommodate digital norms in a holistic manner, not bolting on digital programs to existing businesses.

So, for example, building a mobile app and tacking it onto an existing business is unlikely to be successful, because it doesn't change the fundamental value to the customer. Digital transformations are not about simply building better apps. Instead, your company has to understand what your customers' value most: outcomes.



Which trumps: customer experience or operational excellence?

Nigel Fenwick of Forrester shared the example of a recent experience in the hospitality industry:

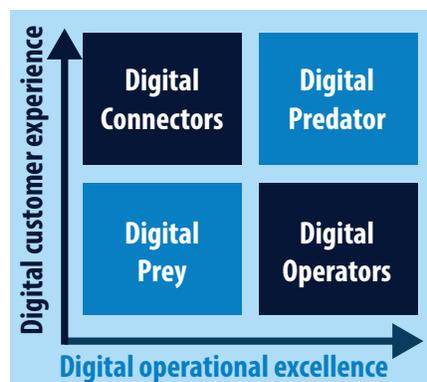
"A week ago, I stayed at a hotel where my smart phone was my key to unlock the door to my room. With that one experience, my entire set of expectations about what is the standard for a luxury hotel has changed."

He told the audience that the next time he's in a luxury hotel that didn't offer a digital key service, he'd always compare it to that peak experience.

Thus companies must determine how digital programs will impact the future value perceptions of their stakeholders. For example, it's not uncommon for B2B companies to favor operational excellence – such as improving margins and efficiencies -- in their digital initiatives. On the other hand, consumer brands may favor customer experience, like that cool digital hotel room key.

Imagine a grid of digital excellence, with customer experience on one axis, and

operational excellence on the other. Digital predators will set up shop in that upper right hand quadrant.



Digital predators deliver outcomes that satisfy the desires of customers. Needs are clinical; desires are emotional. If consumers bought cars simply based on needs, everyone would be driving the same, very efficient car. But desires make different consumers want different cars – and make the same consumer expect more tomorrow than he did yesterday.

Thus, this digital predator quadrant is always moving, so operational agility (rather than mere efficiency) is essential if you want to remain there. That requires your systems to be architected – or at least integrated – for rapid, responsive change.



Digital predators favor:

- Digitally integrated products and services (not just bolt-ons)
- Cross functional efficiency (not just functional efficiency)
- Speed and innovation (not just safety and cost reduction)
- Enhancing the customer's value ecosystem (not just better products)



Making it real: smarter digitization

So let us stipulate that you've resolved to become a digital predator, with a full commitment to operational agility.

That doesn't change the number of legacy systems, technological redundancies, tedious processes and budget constraints you have to contend with. As another expert pointed out, most companies talk a mean game when it comes to implementing a digital transformation journey. But a lot of what they do is talk, especially about customer experiences.

The key, in his view, is delivering from a platform.

"What's behind the really good digital brands is their ability to become platforms. For example, my watch, tablet and phone are just different versions of one platform."

Digital disruption begins by integrating a company's technological backend with smart middleware. Rapid innovation requires that micro-services run at the speed of smart middleware. Data integration enables the agility that predators demand. The demand for integration is fueling the API economy.

Most brands on their way to becoming digital predators have great straight-through processing. That's where the art of applying digital superglue can help an enterprise flourish and accelerate digitization. Finally, there's business optimization: The journey begins by leveraging cognitive analytics and business process management tools.

Most CIOs are under pressure to spend less and do more. They want to convert legacy investments ... so what's holding them back? Disparate multiple systems and processes. Duplications for functionality. The company should convert multiple systems into models of functionality that can be exposed using an API mechanism. No company should want to do everything from scratch.

For instance, an Infosys banking client used to take 20 steps to perform a basic task with its legacy architecture. With the same infrastructure, it now takes four steps, thanks to the Infosys-led redesign of the application process using a customer oriented design approach. Infosys introduced the business process modelling to business users and defined

practical standards and processes for incorporating models into the SDLC. It has helped the client increase in cross-selling and the adaptive engine ensured better engagement with the online consumers.

What else is required of smart middleware? It should be connected and agile enough to build those services very rapidly. A digital journey exposes services and issues that result in making better outcomes. Smart middleware and backend systems are enough to cope with the needs of a growing digital business. They can handle all points of the value chain.

Agile development is the norm. One expert recommended piloting a minimum viable digital solution and iterating with customers and other stakeholders in the business to develop a more and more compelling product.

For those organizations who have been talking about implementing a digital strategy but struggling to push the go button, another expert offered this advice:

"Good today is better than perfect never."

Fast eats slow

An executive currently driving the digital journey for a luxury retailer took the podium to share his personal mantra: it's the fast that eat the slow, not the big that eat the small. In other words, digital predators benefit more from speed and agility than size of company. That's important to keep in mind when your business is over 100 years old.

The company's first digital architecture platform, he acknowledged, was a failure. It wasn't well received, it didn't perform well, it was too expensive. But from the ashes of that project rose the company's integration practices business. That new unit focused on re-architecting legacy systems, putting them into a future state as urgently as possible. (Fast eats slow, remember?) His group kept asking itself: What is every opportunity that we can look at that gives us a 360-degree view of the customer? The answer they came up with it that competition drove them to come up with a digital answer, but so did technology and a desire to transform a venerable company.

At first, his group didn't have the full support from most sections of the IT department - but they persisted. An opportunity to prove themselves came when a partner was re-platforming over the course of a year, planning to bring retailers on one by one. They approached the partner, offering to build integration within just a few months, building interfaces so that no changes to applications would be required. They delivered on time, and it was a game-changer.

"It was a huge win for us. It was the first crack in that century-old infrastructure."

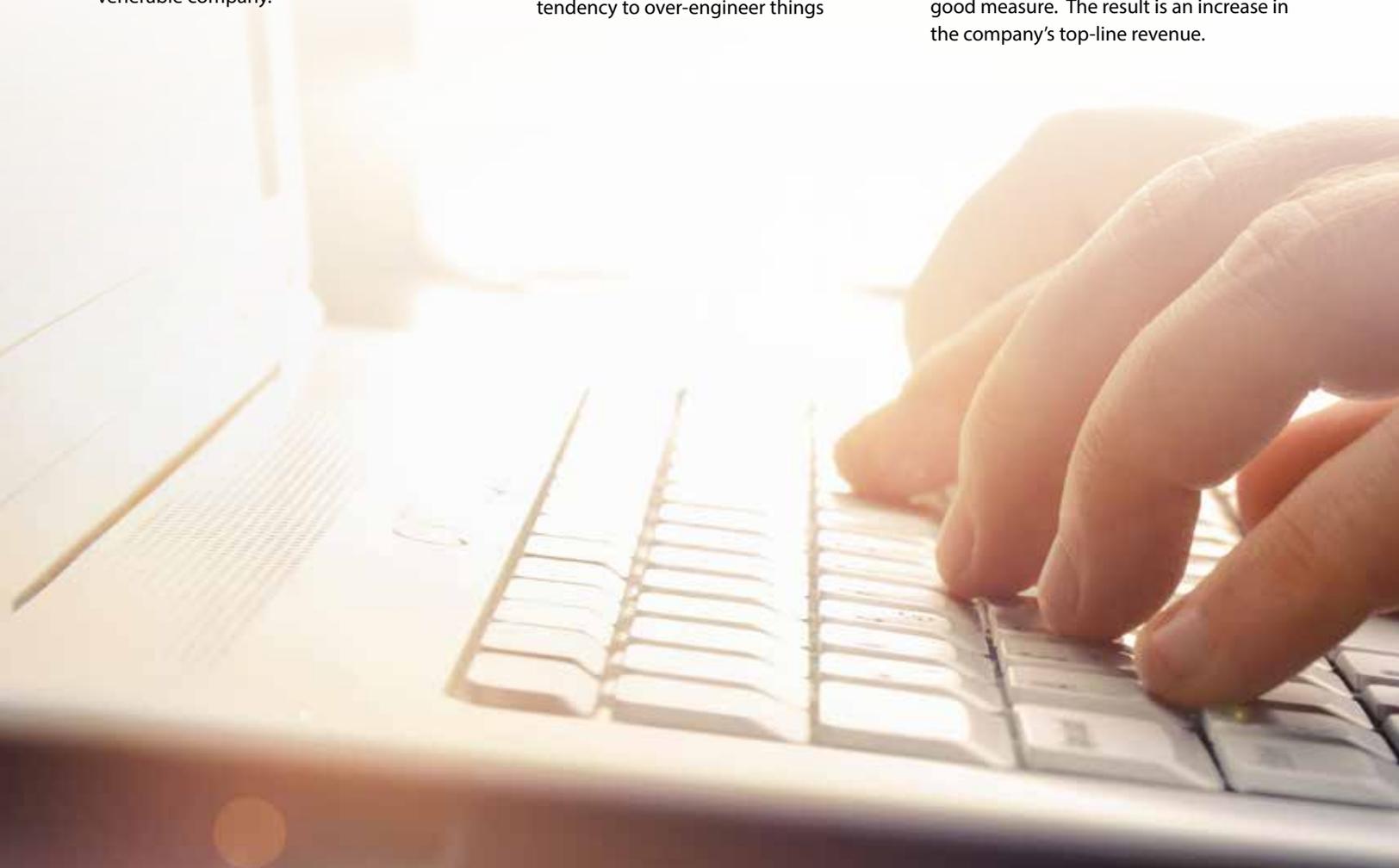
There's something to be said of a century-old infrastructure: You're not always going to have the high speeds that other organizations enjoy. The solution is a two-speed IT. "We're able to support the fast IT with our middleware but we can also support the grassroots work of old enterprise integrations with slow IT", he said.

His advice to his peers included:

- Keep the design simple. There's a tendency to over-engineer things

- Agile architecture is a must because what you're building toward is not an end state; it's a model that has change built into it
- Build it from ground up but make it rapidly changeable
- Finally, sometimes you make compromises – just know that you're compromising. Every time you deviate, make sure you know why. Understand and learn new things and bring the power of data into your environment
- Automate wherever possible
- Treat the process of integration as an application
- Evangelize and know when people have gotten the message ... and then get out of the way

More recently, the retailer became one of the first to integrate a "buy" button to their site from a strategic social media channel – in a record-breaking eight weeks. They even threw in Apple Pay integration for good measure. The result is an increase in the company's top-line revenue.





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We're delivering sophisticated investment instruments to high net worth individuals, so we didn't want to be asking them to be filling out hundreds of pages of forms. Most of that information we already had in various places anyway. So now that information comes pre-populated and the client just has to sign it off. We used to be a bank. Now essentially we're a technology company.

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It used to take us seven days to give our associates updates on what customers were doing. Now they get 360-degree intelligence near real-time, propagated into API calls on an app, while customers are in our stores.

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We've seen many legacy transitions at Infosys. One of our clients is in the manufacturing sector, more than 100 years old. They're really good at what they do but as you might imagine, very methodical as well. Their chief digital officer was tasked with getting ideas out into marketplace but with a run-through of a typical development cycle. We created a digital innovation factory. Every single week those prototypes can be created, allowing them to be much nimbler and agile. They had sensors on devices that predated the Internet. So we put in layers to process and convert them into analytics and take advantage of edge apps.

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We're moving in the direction of self-healing. We've had some outages on our web site, and we've learned from those mistakes. A micro-services strategy is one answer to the question of self-healing. When you're working with monolithic structures, it's tough to figure out what the problem is. Our new architecture is more modular and will make it easier to pinpoint and auto-correct problems.

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We focus on the adaptability of people to digitization. It's a type of change management. Suppose you launch a promotion and make a mistake. By the time the data goes to the point of sale, you've lost millions of dollars. But if at the point of sale you have an auto-check, a couple of hours would mean saving millions of dollars.

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There's a recognition that the traditional proprietary approach is not dead. But the movement toward open technology – Open Source – is about how can you give as well as pull in information. We've joined organizations like the Industrial Internet Consortium; we've learned so much as well as contributed so much to it. Everyone becomes more effective when it's a two-way street.

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Conclusion

What's fueling the most impressive digital transformations around us?

Discovering the talents, knowledge, and infrastructure an enterprise already has, and integrating them into a more powerful, agile and human-centric capability.

At Infosys, we have a unique way of helping enterprises navigate their digital journeys.

Aikido relies on basic ideas that are modern yet ancient at the same time. The "Ai" means to unify and harmonize disjointed pieces. "Ki" is about energy and morale – tapping into your organization's existing knowledge, processes and systems. And the "Dō" is about finding a path forward. These three elements exemplify how Infosys is helping companies accelerate digitization through next-generation integration.

And speaking of making the right connections, do **connect with us** for advice, introductions (maybe someone you met at the roundtable?) or feedback on your digital integration strategy.



Roundtable speakers



Nigel Fenwick

Vice President and Principal Analyst, Forrester Research

As vice president and principal analyst, Nigel supports CIOs working across the C-suite to provide insight and guidance in a world disrupted by technology. A leader in digital business and strategy, Nigel can be seen speaking at events around the world and he's frequently quoted in both trade and mainstream media. Recognized as a visionary with insight into emerging trends, he has published leading research on digital business, social media, business strategy, innovation, retail, and marketing. His latest research on digital business examines customer value and the fundamental business changes needed in the age of the customer to win, serve, and retain customers.



David Barksdale

Director, Integration, Data Warehouse and Reporting, Neiman Marcus Group

David was instrumental in providing strategic direction and transforming the NMG IT application integration landscape, which provided the foundation for NMG's omni-channel initiatives. He was responsible in building a shared services team that provides architectural oversight and governance for integration across all NMG business domains and also delivers integration solutions for over 50 projects annually. In his 10+ years with the company, he has worked as a software engineer, development manager, application director, and enterprise architect. Prior to Neiman Marcus, David was an independent consultant for non-profit, commercial and government companies. David also held various leadership positions at MicahTek, Inc., Harrison House Inc., and Amoco Oil and Gas. David earned his Bachelor of Science Degrees in Business Administration and Telecommunications from Oral Roberts University in Tulsa, Oklahoma where he graduated Magna Cum Laude. David loves playing guitar in his free time.



Ravi Kumar S.

Executive Vice President and Chief Delivery Officer, Infosys

Ravi is an Executive Vice President and the Chief Delivery Officer at Infosys. In this role, he leads the Infosys global delivery organization across all global industry segments, driving digital transformation services, application development and maintenance; independent validation services, engineering services, emerging technology solutions, business intelligence and analytics, cloud and infrastructure, and enterprise package applications service lines. He also oversees Infosys operations in Japan. He is the Chairman of the Board of Infosys China and is also on the board of Infosys Public Services and McCamish Systems (an Infosys company).



Jeff Kavanaugh

Partner, Head Manufacturing and High-Tech, Infosys Consulting

Jeff Kavanaugh is a Senior Partner with Infosys and leader of its Manufacturing and High-Tech Consulting business. Jeff has over 25 years of manufacturing and consulting experience, including work with many manufacturing and high-tech firms. His current research interest is in the area of Product Innovation and Digitization, and he holds a US patent for Product Effectiveness. Beyond his client responsibilities, Jeff also serves on the board of the Institute of Business Analytics at Indiana University and the Marketing Analytics Advisory Board at the University of Texas at Dallas.

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